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THE SIXTH SATELLITE OF *JUPITER*.

Owing to its brightness, the sixth satellite has been photographed readily in ten minutes with the Crossley reflector. Plates have been obtained on thirty-six nights, the last observation being on March 22d. The planet is now too near the Sun for the satellite to be observed.

A preliminary investigation of the orbit shows the inclination to the ecliptic and the planet's equator to be about 30° . It has a period of about two hundred and fifty days, its mean distance being about seven million miles.

It is not possible to say yet with certainty what the direction of its orbital motion is.

The large inclination of the orbits of both the sixth and seventh satellites to the plane of the planet's equator suggests that these bodies have not always belonged to *Jupiter*, but that they may be captures.

The actual diameter of these satellites can not be measured, but the brightness indicates a diameter for the sixth of one hundred miles or less.

C. D. PERRINE.

1905, March 30.

THE SEVENTH SATELLITE OF *JUPITER*.

An examination of negatives of the sixth satellite taken with the Crossley reflector on January 2d, 3d, and 4th, showed a much fainter object which apparently belong to *Jupiter*. It was then north and west of *Jupiter*, and its motion was toward the planet. The difficulties which presented themselves in determining the true character of the sixth satellite were greater in the case of the new one. Being so much fainter, observations were much more difficult to secure, owing to the long exposures required. Its motion was likewise harder to interpret. However, observations on February 21st and 22d made it clear that it belonged to *Jupiter*.

The seventh satellite is not shown on the negatives of December, it being just outside those fields.

Observations have been secured on twenty nights, the last being on March 9th.

A preliminary investigation of its orbit shows it to be quite eccentric, the mean distance from *Jupiter* being about six mil-

lion miles, with a period of about two hundred days. Its orbit is inclined to the plane of *Jupiter's* equator, at an angle of about 30° . The direction of motion is as yet uncertain.

Its photographic magnitude is estimated to be not brighter than the sixteenth. In comparison with the other satellites and the asteroids this indicates a diameter of about thirty-five miles.

C. D. PERRINE.

1905, March 30.

COMET *a* 1905.

The first comet of the present year has just been discovered by M. GIACOBINI at Nice. According to the telegram received here on Monday, March 27th, the date and position of discovery are as follows: March 26.3212, G. M. T., R. A. $5^h 44^m 14^s.0$; Decl. $+10^\circ 56' 56''$.

An observation secured here with the 12-inch telescope on Monday evening gave the position, March 27.6692, G. M. T., R. A. $5^h 48^m 54^s.85$; Decl. $+12^\circ 35' 42''.9$.

The comet is small and faint, even when viewed through the 12-inch telescope.

R. G. AITKEN.

March 28, 1905.

NOTE ON THE WORK OF THE D. O. MILLS EXPEDITION TO CHILE.

A recent letter from Professor WRIGHT, in charge of the D. O. Mills Expedition to Chile, informs me that the work of measuring the radial motions of the stars proceeds substantially in accordance with the original programme. The southern winter was an unusually wet and stormy one, but the late spring and early summer (to date) were unusually favorable. As by-products of the investigation Professor WRIGHT reports that he and Dr. PALMER have discovered seventeen spectroscopic binary stellar systems. A recent press dispatch from Santiago, published in the papers of this country, refers to the discovery of twenty new stars. This is a palpable error, and the number undoubtedly refers to the spectroscopic binary systems discovered up to a date considerably later than that of the letter spoken of above.

W. W. CAMPBELL.